

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An optical pick-up apparatus that records information in an optical recording medium and/or reproduces information from the optical recording medium by means of light, comprising:

a light source for emitting light;

a diffraction grating for diffracting light emitted from the light source, the diffraction grating being formed line-symmetrically with respect to a virtual line perpendicular to a radius direction of the optical recording medium in an attached state and perpendicular to the light emitted from the light source, and divided into a plurality of diffraction regions formed in such a manner that each has an inclination angle with respect to the virtual line and grating cycles of adjacent diffraction regions have a phase difference of 180 degrees with each other;

light collecting means for collecting light emitted from the light source onto the optical recording medium;

a light diverging element for diverging reflection light reflected on the optical recording medium; and

a light receiving element for receiving the reflection light diverged by the light diverging element, wherein the diffraction grating is formed on a rectangular substrate made of a light-transmitting material.

2. (Original) The optical pick-up apparatus of claim 1, wherein the diffraction grating is disposed between the light source and the light diverging element.

3. (Original) The optical pick-up apparatus of claim 1, wherein the diffraction grating is formed on the substrate on a surface facing the light source, and the light diverging element is formed on the substrate on a surface facing the light collecting means.

4. (Original) The optical pick-up apparatus of claim 3, wherein the light source is formed integrally with the substrate on which the diffraction grating and the light diverging element are formed.

5. (Original) The optical pick-up apparatus of claim 1, wherein the light source is formed in such a manner that an outer shape thereof is shaped like a rectangular parallelepiped, and that a width w , which is a dimension in a direction parallel to a surface of the optical recording medium, is larger than a thickness t , which is a dimension in a direction perpendicular to the surface of the optical recording medium ($w > t$).

6. (Currently Amended) An optical pick-up apparatus that records information in an optical recording medium and/or reproduces information from the optical recording medium by means of light, comprising:

- a light source for emitting light;

- a diffraction grating for diffracting light emitted from the light source, the diffraction grating being formed line-symmetrically with respect to a virtual line perpendicular to a radius direction of the optical recording medium in an attached state and perpendicular to the light emitted from the light source, and divided into a plurality of diffraction regions formed in such a manner that each has an inclination angle with respect to the virtual line and grating cycles of adjacent diffraction regions have a phase difference of 180 degrees with each other;

- light collecting means for collecting light emitted from the light source onto the optical recording medium;

- a light diverging element for diverging reflection light reflected on the optical recording medium; and

- a light receiving element for receiving the reflection light diverged by the light diverging element, wherein the diffraction grating is formed integrally with the light collecting means.